

RADIATION PHYSICIST

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, an incumbent of this class devises, directs and implements research, training and monitoring programs for the Westchester County Medical Center to protect hospital patients and personnel from radiation hazards and ensure compliance with applicable radiation and hazardous material requirements of the department and regulatory agencies. Responsibilities include maintaining an adequate inventory of properly calibrated and highly technical instrumentation, equipment and supplies for investigations and analyses of incidents, developing inspection standards, radiation exposure limits, safe work methods, and decontamination procedures and recommending pertinent safety precautions. The incumbent manages radioactive/hazardous waste storage and disposal activities, plans and provides in-service training regarding proper radioactive/hazardous waste safety practices and participates in emergency plans and response to incidents. Supervision may be exercised over support staff. Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

Conducts research to develop inspection standards, radiation exposure limits, safe work methods, and decontamination procedures and tests surrounding areas to insure that radiation is not in excess of permissible standards which have been established by regulations;

Performs and interprets complex chemical analyses and radiological measurements utilizing sophisticated analytical instrumentation such as a portable gas chromatograph, HNU photionization detector, radiation detection and measurement equipment, various explosimeters and gas detection devices, colorimetric devices and analytical chemical techniques;

Prepares, coordinates and reviews hazardous/radioactive materials emergency plans and conducts investigations of incidents and responds to emergencies;

Compiles, evaluates and interprets the results of tests and measurements to ensure that permissible standards are not exceeded as established by regulations;

Maintains, calibrates and operates instrumentation and field response equipment and ensure their proper operational readiness;

Researches, analyzes and evaluates the applicability of new techniques, procedures, equipment and instrumentation to ensure conformance with standards for protection;

Instructs personnel in the operation, maintenance and decontamination techniques of equipment, and in the principles and regulations related to radiation hazards;

Supervises and instructs subordinate technical staff in the organic and inorganic chemical analysis, monitoring and radiological measurement of environmental samples and interpretation of results;

Prepares technical specifications and guides for the purchase, maintenance, calibration, and operation of chemical and radiological equipment;

EXAMPLES OF WORK: (Illustrative Only) (Cont'd.)

Requisitions and maintains adequate inventories of equipment and supplies and records location and quantity;

Supervises and instructs trainees during radiological/hazardous materials safety training programs, tests and exercises;

Performs data analysis and evaluation, prepares reports, maintains operating logs and participates in special research projects and investigations;

Maintains quality control through the preparation and standardization of reagents and standards, and the generation of standard curves using reference standards;

Participates in federal and state professional testing programs and maintains needed certifications in assigned areas of responsibility;

Provides expert testimonies in enforcement actions.

REQUIRED KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES: Thorough knowledge of radioactive/hazardous materials measurement and detection instruments; thorough knowledge of the principles, techniques and procedures involved in radiological physics; thorough knowledge of organic and inorganic chemistry laboratory procedures, techniques and safety precautions; good knowledge of scientific principles and practices including chemical and radiological terminology; good knowledge of the biological effects of radiological and chemical agents; familiarity with current developments in the field of environmental chemistry and radiation; familiarity with environmental rules and regulations; ability to plan, organize and coordinate program activities; ability to supervise the work of subordinate staff; ability to clearly and concisely express ideas orally and in writing; skill in the operation and care of instrumentation and technical equipment; ability to research new methods and procedures; ability to compile and present instructions; ability to understand and interpret complex written regulations and technical reports; initiative and resourcefulness; accuracy; thoroughness; dependability; tact; good judgment; integrity; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: A Ph.D.* in physics, chemistry, engineering or a related field and four years experience in analytical, chemical and/or radiological instrumentation.

SPECIAL REQUIREMENT: Possession of a valid New York State driver's license.

*SPECIAL NOTE: Education beyond the secondary level must be from an institution accredited or recognized by the Board of Regents of the New York State Education Department as a post-secondary, degree-granting institution.

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Job Class Code: C0840
Job Group: XV